

### REMARKS

Favorable reconsideration and allowance are respectfully requested. Claims 1-109 are pending and at issue. Claims 1-21, 25-78, 80-86, 90-94, and 99-109 have been withdrawn from consideration due to a restriction requirement, the invention of Group I having been elected with traverse.

### Restriction Requirement

In this Office Action, the Examiner required a further election of the following alleged species within the claimed invention:

(a) graphite nanotubes [sic]; or

(b) graphite fibrils

if (b) is elected, then a further election of

(c) cylindrical fibrils; or

(d) fishbone fibrils

if either (a) or (b) is elected, then a further election of species:

(e) structure  $[C_nH_L]R_m$

(f) structure  $[C_nH_L]A_m$

(g) structure  $[C_nH_L][R'-R]_m$

(h) structure  $[C_nH_L][R'-R]_m$  (for (b) only)

(i) structure  $[C_nH_L][X'-R_a]_m$

(j) structure  $[C_nH_L][X'-R_a]_m$

(k) fibril with porphyrin functionality

and for (h) or (j), Y as exemplified in Claim 26.

Applicants traverse this election requirement for the reasons below.

**a.     The Standard for a Restriction Requirement (MPEP § 803)**

Under 35 U.S.C. § 121, an application may properly be required to be restricted to one of two or more claimed inventions only if they are able to support separate patents and they are either independent or distinct. If the search and examination of an entire application can be made without serious burden, it is incumbent upon the Examiner to examine the entire application on the merits, even though it includes claims to distinct or independent inventions, MPEP § 803.

Reasons and/or examples must be provided to support any restriction requirement.  
MPEP § 803.

According to MPEP § 802.01, “independent” is defined as an absence of a disclosed relationship between two or more claimed subjects, such that they are unconnected in design, operation, or effect. The term “distinct” refers to two or more subjects which are related but are capable of separate manufacture, use, or sale as claimed, and are patentable over each other. Moreover, MPEP § 806(3) states that where inventions are related as disclosed and not distinct as claimed, restriction is never proper. For example, where restriction results in two sets of claims that may be rejected, each over the other, for double patenting, restriction was not proper.

**b.     The Present Election Requirement Was Not Proper**

At the outset, Applicants have submitted that the present election requirement is not proper because the Examiner has provided no explanation of why he believes the election to be proper. As discussed above, a rationale for the election requirement must be provided. MPEP § 803. However, none has been given. Therefore, the election requirement is improper.

Even if support for the election requirement were provided, Applicants respectfully submit that a restriction here would still be improper. Groups (a)-(k) merely represent different embodiments of a single inventive concept for which a single patent should issue. Each of the claims relate to compositions comprising fibrils and nanotubes.<sup>1</sup> It is respectfully submitted that fibrils are simply a type of nanotube, and the two terms are used interchangeably throughout the specification. For example, the specification states at page 4, in the description of U.S. Patent No. 5,171,560 to Tennent, that the fibrils are "substantially cylindrical, graphitic nanotubes" (emphasis added). Furthermore, the specification states at page 5, that when "the projection of the graphitic layers on the fibril axis extends for a distance of less than two fibril diameters, the carbon planes of the graphitic nanofiber, in cross section, take on a herring bone appearance" (emphasis added). Therefore, because these terms are used interchangeably in the specification, they are not distinct species.

The Examiner asserts that fibrils and nanotubes (as corrected by the Applicants) are distinct. However, he has cited no authority as the basis for this assumption. If the Examiner is aware of any reference that specifically states that fibrils are distinct from nanotubes, he is invited to produce such a reference so that Applicants may have an opportunity to examine it. In the absence of such a reference, the election requirement is improper.

Even assuming *arguendo* that species (a)-(k) represent distinct inventions, which they are not, Applicants submit that a search of the subject matter of each group would not be a serious burden on the Examiner. The M.P.E.P. § 803 (Eighth Edition) states:

If the search and examination of an entire application can be made without serious burden, the examiner must examine it on the

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<sup>1</sup> Applicants note that the term "nanotubules" is not present anywhere in the Applicants' specification or claims. It is assumed that the Examiner meant to use the term "nanotubes."

merits, even though it includes claims to independent or distinct inventions.

While several of the claims may recite properties of the fibrils which are not positively recited in the other claims, e.g., cylindrical or fishbone (not "fishtail" as the Examiner indicates in the Office Action), a search of the term "fibril" or "nanotube" will necessarily uncover the art related to all of the species that fall within the genus "nanotubes", including fibrils having a variety of different properties.

Applicants further note that species (c) and (d) were said to be distinct, presumably because one is cylindrical and the other is not, although no explanation is provided for the election requirement. However, species (d), which should be fishbone fibrils, as the Examiner stated in the Office Action, are in fact cylindrical fibrils. Therefore, if the election is premised on this distinction, it is improper. Fibrils are simply a type of nanotube, and a search of one species will necessarily uncover art related to the other.

Furthermore, MPEP § 808.02 requires an appropriate explanation of one of the following reasons if the Examiner concludes that the related inventions are distinct: (A) separate classification thereof; (B) a separate status in the art when they are classifiable together; or (C) a different field of search. No evidence has been presented of any of the above-three criteria as specified by MPEP § 808.02.

Applicants urge that the examination of the claims for species (a)-(k) together, would not be an undue burden on the Examiner. A generic search of nanotubes will uncover the art related to nanotubes and fibrils. Numerous independent searches would not be required, and therefore, it would not excessively tax the Examiner to examine each of the allegedly distinct species together.

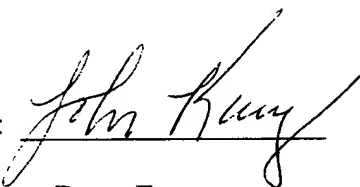
However, in an effort to fully respond to the restriction requirement, Applicants provisionally elect species (b) graphite fibrils, (c) cylindrical fibrils, and (g) structure  $[C_nH_L][R'-R]_m$ , for further prosecution in this application. Therefore, with this election of species, claims 22, 23, 24, 79, 87-89 and 95-98 are pending and at issue.

### CONCLUSION

Applicants respectfully submit that the claims are in condition for allowance and such action is earnestly solicited.

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Respectfully submitted,

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